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## FOR EXPORT MERCHANT-SHIPPERS.

THE CHEMIST AND DRUGGIST, of March 10, will be circulated to all firms in the United Kingdom who last year exported druggists' goods of any kind. This circulation will be in addition to the regular issue to our subscribers throughout Europe, Asia, Africa, India, America, and Australasia. Our past experience convinces us that this is a valuable issue to advertisers, because it is practically the only opportunity that merchant-shippers have of coming into direct touch with the drug and allied trades, and many of the most important merchants file the copy for future reference in executing orders. We also find that this is the most favourable time of the year for directly addressing merchants, and wholesale houses will do well to communicate with the Publisher in regard to space and specially-arranged advertisements.

## POSTCARD COMPETITION.

FEBRUARY, 1894.

WE remind subscribers, their employes, and members of their families that this month's competition closes on Wednesday next. What we ask them to do is to draw up an advertisement for Mr. Blank, a chemist, who has a liver-pill which he thinks a lot of. He has taken a space 2 inches by 3 inches in a local paper, and now requires a catching advertisement to put into it. Competitors will please use postcards for their ideas.

## Summary.

WE report a death from sweet spirit of nitre. The victim, a woman of 54, drank 16 oz. in a day (p. 269).

OUR Paris correspondent's letter contains further reference to municipal pharmacies, which the Socialists appear to be determined to establish (p. 270).

THE Belgian Cour de Cassation has decided that the labels on proprietary medicines must indicate the ingredients. The decision is given in reference to Sequah's medicine (p. 283).

IN the Christmas shop-window competition organised by *Tit-Bits* a number of chemists participated. By the courtesy of the Editor of *Tit-Bits* we have been favoured with the photographs, and give a reproduction of the whole in a group on p. 279.

THE centenary of the birth of F. F. Runge, who discovered aniline and carbolic acid, has just been celebrated at Oranienburg. He was a pharmacist in the early part of his career, and made many notable discoveries apart from those mentioned (p. 271).

THE chemists of Kingston have felt insulted at the remarks made by the Medical Officer to the Board of Guardians there regarding the supply of medicines. They noticed the remarks in this journal, and have protested in writing to the Board (p. 268).

MR. EDWIN WILLIAMS has informed the Liverpool Chemists' Association that he has been unable to find pure oleates in the market, and he stated that oleate of mercury especially is liable to decomposition. He showed how better oleates may be made (p. 273).

THE use of animal or gland extracts in therapeutics is growing steadily. In an Editorial note the physiological principles upon which such treatment is based are pointed out, and the probable influence of the practice in pharmacy is indicated. Incidentally the most recent views of the treatment are commented on (p. 281).

THE Glasgow Pharmaceutical Association had a useful evening last week, in the course of which a number of dispensing topics were mentioned and discussed (p. 274). The Edinburgh Assistants' Association also had a good meeting, the most important item being a suggestion by Mr. C. F. Henry to double the strength of tr. iodi, B.P. (p. 277).

THERE appears at present to be a decided move on the part of the public in regard to the more rigid control of the sale of poisons. The *Pall Mall Gazette*, amongst other newspapers, has given expression to such sentiments, and following upon recent action by the Pharmaceutical Society and the police, the movement is satisfactory. We comment upon the whole matter on p. 282.

A VALUABLE contribution on the ash values of saffron is made by Mr. John Barclay, B.Sc., of Birmingham, who finds that neglect of recognising loss of moisture in samples may cause analysts to return the ash percentage too high, and so condemn the purity of the samples. Mr. Barclay backs up his statement with ample data, and suggests a revision of the pharmacopoeial standard (p. 275).

DR. BERNARD DYER has suggested to the Chemical Society an improved method of estimating the available mineral plant-food in soils. This consists in treating a known weight of the soil with a 1 per cent. citric acid solution (which acidity closely approximates to that of rootlet-juice), and determining phosphate and potash in the usual way. The paper was considered a highly important one, but it was freely criticised. Rothamsted soils were used in the experiments (p. 273).

MR. EDMUND WHITE, improving upon an old method, proposes to preserve fresh infusions by keeping them in sterilised flasks plugged with sterilised cotton. He also recommended the use of chloroform as a preservative (p. 274). The same subject has been discussed in the Midland Association. Mr. John Barclay finds that inf. gent. conc. is very variable, and Mr. Alcock got several students to make inf. calumbæ and inf. quassie, and the variations in strength were startling (p. 275).

argue against the absolutely reasonable demand that carbolic acid shall be scheduled as a poison.

If the fathers of our trade had been wiser, the present transition stage would have been got through a quarter of a century ago. They did not realise its importance to themselves, and some of them, especially the Pharmaceutical Council section, entertained a little malice against the poison-sections of the Pharmacy Act because these had been forced upon them and were not their discovery. The public and the Legislature, on the other hand, having provided, as they thought, sufficient safeguards against accidental poisoning, complacently forgot all about the matter, and so it was allowed to slumber.

Everybody has woke up lately. So much the better, and it is not our intention to comment on the past. We are heartily glad to see the Pharmaceutical Council in earnest about the suppression of the illegitimate trade in poisons. They have made this their chief duty during the past year or so, and research laboratories, *conversations*, and schemes of education have very properly retired into the background for a while.

So far, good; but it is necessary to say that the work has only been begun as yet. It has to be made clear to everybody that it is the will of Parliament, the will of the nation, and our own intention that the retail trade in poisons is to be rigidly confined to registered chemists and druggists. Amateur photographers have to learn this; so have farmers, makers and purchasers of patent medicines, housekeepers, grocers and oilmen, and people contemplating murder or suicide. Some of them find the lesson a hard one, but they will learn it all the more thoroughly through their struggles. The patent-medicine men have evidently discovered that the situation is serious. They are fighting the battle inch by inch, or we should rather say grain by grain. They, and the Pharmaceutical Society too, are determined to ascertain through the law-courts just what are the limits of a preparation of poison, and it is not at all unlikely that the case at Derby, whichever way it may be decided there, will be the key-case of this contest.

The Privy Council and the Home Secretary may need wrestling with on the carbolic-acid question. They are unaccountably deliberate over that addition to the poisons schedule, but if they should set themselves against it, we hope the Pharmaceutical Council will prepare for action promptly. They would have all the argument, and the sympathy of all people of influence on their side, and they would be sure to win with credit if they would only show the necessary vigour.

But they can, and should, do much more than thus fight formally. At present they only move, we believe, when information reaches them. Perhaps the information received may suffice for the moment to keep them busy, but the instant slackness arrives they should seek out cases. Moreover, they should do as other public bodies do in these days. The Board of Inland Revenue, the London County Council, and other bodies entrusted with the administration of statutes notify persons concerned of the law and of their determination to enforce it. A circular from the Pharmaceutical Society to dealers in photographic chemicals, agricultural chemicals, and poisonous substances generally would be at the same time a fair warning and a legitimate means of making the Act known. If the sale of poisons by unregistered persons were kept down as is the sale of spirits by unlicensed persons, it would be good both for the public and for the trade.

If a consummation of this kind is to be attained, chemists must show themselves willing and competent to fulfil all reasonable conditions. They must assist in every way to

minimise the risks of the trade, but they must at the same time provide all that is necessary in respect of price, convenience, and supply of legitimate requirements.

## GLAND EXTRACTS.

IN the *fin de siècle* Pharmacopœia vegetarianism reigns supreme, but in the good old days it was quite otherwise. The ancients drew their *materia medica* with a happy impartiality from both animal and vegetable kingdoms, and, indeed, not so very long ago every apothecary's shop could furnish a collection of animal curiosities sufficient to put the witches' cauldron in *Macbeth* to shame. Then came science, and the "eye of newt and toe of frog" style of prescription passed away. The physician became possessed with a desire to know something about the action of the remedies he used, and naturally inorganic and plant products were the first to give him satisfaction, while the more complex and less easily obtained and preserved products of animal life were dismissed to the background for a time. For a time only, however, and now we are fairly started on our way back to the flesh-pots. Animal alkaloids, albumoses, and gland extracts are already on the cards, and neither a prophet nor the son of a prophet is required to predict that these and similar substances will bulk largely in the B.P. at no very distant date.

Animal *materia medica*, as a whole, is a big subject, and here it will suffice to touch upon one of its departments—extracts of animal glands. This department is, perhaps, less important and less promising than the others; but results have been obtained in it, which a year or two ago would have seemed impossible, and at least one disease, formerly incurable, has now been unquestionably cured. We refer, of course, to myxœdema, treated by thyroid extract, and we might also mention its still more wonderful effects on cases of cretinism. The results in these have been conclusive—so conclusive that even the voice of the scorner is silenced, and the inevitable stage of ridicule being passed, the new method has entered upon the other inevitable and opposite stage. The medical mind seems to be suffering from an animal-extract mania, and preparations of almost every organ in the body are being tried upon all sorts and conditions of disease. This mania for novelties is, however, nothing more than a little weakness to which "the profession" has always been more or less liable, although, fortunately for the preservation of the genus *homo* the symptoms are not lasting. In the present instance we may expect a recovery *tutus, celer, et jucunde*, and then animal extracts will get a chance to settle down to their proper place in the therapeutic list.

To attempt to say what that place is, may, at present, be a little premature, but the experience so far gained seems to justify at least one or two deductions. The general principles of the method are these: A gland produces certain chemical substances—its secretion. If this secretion is essential to the economy, and if for some reason the gland fails to supply it, disease results. Disease produced in this way can be cured by supplying the secretion artificially. This appears to indicate pretty clearly the directions in which the prospectors of gland extracts are likely to "strike ile," for of the numerous glands of the body not every one but some only can be of use.

From the extract point of view we may divide the glands of the body into two great groups—glands provided with ducts and ductless glands. The sweat glands, the salivary glands, the glands of the stomach and intestine and the kidneys are instances of the variety with ducts, while the

spleen, the lymphatic glands, the red bone-marrow, the pituitary body, the thymus gland, and the suprarenal capsules belong to the ductless group. This possession or non-possession of a duct means an essential difference, for the secretion of all the ductless glands remains part and parcel of the body, but the secretion of a gland with a duct does not. The ducts all lead to the surface of the body either directly or indirectly through some of the internal passages. In any case the result is the same—whatever the gland secretes is drained away through the duct, and as it ceases to be an integral part of the body it also ceases to have any direct action on the tissues of the body.

It follows, therefore, that these glands with ducts cannot very well occasion disease in the way we have indicated, and no benefit can be expected from the administration of extracts made from them. With the ductless group of glands it is otherwise. They have no communication with the exterior of the body, and all the chemical substances they produce must enter the circulation and exercise directly on the tissues whatever action they possess. Just here arises the question, "What may that action be?" In the case of a gland with a duct there is, of course, no trouble. The secretion can be collected, and bottled, and labelled. Its chemical constituents and its physiological action can be put down in black and white and a Q.E.D. writ large thereon.

The functions of the ductless glands, on the other hand, are still a matter of dispute, and there is no other group of organs in the body about which physiologists know so little. Some of them, indeed, are even yet looked upon as mere curiosities, but this much we can take for granted: none of these glands are there without some useful function. The very significant fact that in certain diseases they undergo profound alterations in size and structure has been known for a long time, but the exact bearing of these alterations upon the diseases was a matter merely for conjecture. Now, however, the experience gained from myxœdema has thrown a flood of light on the whole question. The gradual wasting of the thyroid gland, and the simultaneous overloading of the whole body with a growth of mucoid tissue, suggested the inference that the normal thyroid secretes something that prevents the growth of the parasitic tissue. But the inference becomes as nearly a certainty as anything medical can be when by giving thyroid extract we see the rapid disappearance of the mucoid substance and the return of the system to health. In addition to myxœdema and cretinism quite a number of diseases are already known to be associated with changes in one or other of the ductless glands, and now that attention has been prominently drawn to the matter we may expect to have many additions to the list. It will be in diseases of this class that the gland or its extract can be given with some reasonable prospect of success.

For pharmacy, as well as for medicine, this opens a new field—of no great size, it is true, at present, but promising for the future. From the trade standpoint gland extracts have one cheerful quality—unlike the majority of things medicinal they belong to that admirable class of articles which once used are always used. There is no such thing as a permanent cure of myxœdema or any allied disease. The glands normally producing the secretion being destroyed, the cure can be kept up only so long as the treatment is kept up, and through life a regular supply of gland extract becomes as necessary as a regular supply of food and drink.

Animal extracts do not come to the pharmacist as an unmixed blessing. They bring with them difficulties—numerous, peculiar, and not provided for in the subjects of the Major and Minor examinations. These will no doubt be

overcome in due time, and when they are we shall have pharmaceutical preparations containing the active element of the gland, and that only, elegant in form, innocent of germs or toxins, and capable of being prescribed and dispensed *secundum artem*, with adjuvants and correctives if need be, and with that fine precision and gradation of dose which are almost, if not quite, the most important factors of successful treatment. A great deal remains to be done before this state of perfection can be reached, but the enterprising pharmacist is already well in the running, and soon we may expect to see his shelves decorated with pilula pituitaria, syrupus thyroideæ, succus suprarenalis, and many other startling and novel remedies, which will doubtless prove a blessing both to "him that gives and him that takes."

## ELECTRIC ALKALI.

A CHEMICAL venture which "should prove eventually almost as remunerative as a somewhat similar undertaking—Brunner, Mond & Co. (Limited)"—is a tempting proposal in these days of small dividends or none. The promise is made on behalf of the Electro-chemical Company (Limited), which has been formed, with a capital of 200,000*l.*, for the purpose of acquiring Messrs. Holland and Richardson's patents for the electrolytic production of caustic soda and chlorine. The advance prospectus which has been issued to the trade is somewhat meagre in the details necessary for a proper estimate of the value of the Holland-Richardson patents; for although the process has been in operation experimentally since 1891 at the Snodland Paper-mills, Kent, the actual work done by the plant during that period is not stated. The prospectus is accompanied by reports on the process from Dr. John Hopkinson, F.R.S., Mr. James Swinburne, an electrical engineer, and Mr. J. Leith, an alkali-manufacturer who was for some time in the vendor company's employ superintending the process, with analytical reports on the caustic soda and bleach produced. In none of these do we find the technical particulars which an alkali-manufacturer would especially desire. Dr. Hopkinson reports that "about 500 amperes were passing through thirteen tanks" when he observed the process, and he calculates from well-established electro-chemical data that that amount of electric force "will decompose 363 lbs. of common salt per week of 150 hours." This amount agrees with what Dr. Hopkinson was told was the practical experience. We may, therefore, ask why the promoters, having that practical experience, do not give (1) the cost of the plant in its present condition; (2) the actual cost of working it; (3) the amount of salt used and the proportion of it decomposed; and (4) the amounts of caustic soda and bleaching-powder produced. Even Mr. Leith, who supervised the plant for 28 weeks, "each of 156 hours," only tells us that during that period he "turned out about 5 tons and 8 cwt. of caustic soda and bleach from each charge." Good; but what was the charge; how many were there in the 28 weeks; and did the yields of alkali and chlorine agree with theory? It should be remembered that hitherto the electrolytic difficulties have been the bugbear in this department of electro-chemistry, and Messrs. Holland and Richardson appear to have solved at least two of these. First, by getting rid of a diaphragm between cathode and anode they have reduced resistance, thus effecting a saving in power; and by making the cathode of copper coated with oxide of the metal they provide a means of fixing the nascent hydrogen, which has also been of considerable trouble to experimenters. The latter improvement is particularly ingenious, but it seems to us that if the process is worked on a large scale the copper-oxide requirement will be enormous, because the fixation of the